

New York State Department of Transportation

Yellow Flag NB22CTW019

By: Rehan Afridi

Flag Date: April 27, 2022

Superseding Information:

This flag supersedes: YF NB2158W009

Structure Information

BIN: 1065318

Feature Carried: 278I278IX2M23027

Feature Crossed: 6TH AVENUE

Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY

County: KINGS

Political Unit: City of NEW YORK

Approximate Year Built: 1962

Posted Load Matches Inventory : Yes

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 322

Verbal Notification Information

Person Notified: Heinz Joachim, P.E.

Date: April 27, 2022 10:00:00 AM

Of: NYSDOT Region 11

Signature Information

Signature: Rehan Afridi, P.E. 075185

Date: May 11, 2022

Reviewed By: Robert Kemp

Date: May 11, 2022

Attachments: 5

Flagged Elements

Parent Element	Element	Total Quantity	Unit
Span Number : 157			
	107 - Steel Open Girder/Beam	781	ft
	PR831 - Steel Beam End	34	each

Flagged Condition Description

This Yellow Flag No. NB22CTW019 supersedes previously issued Yellow Flag No. NB2158W009.

Location: Span 157, Girder G6 at Pier 156

Description: The end of Girder G6 in Span 157 at Pier 156 exhibits severe corrosion resulting in an overall web bearing area section loss of approximately 44% (previously 46%) and an overall shear web area section loss of approximately 31% (previously 36%) with an average overall localized section loss of approximately 55% for 5" L x 4" H area directly above the bearing below the guide angle (Photo 2). The web of the girder exhibits a 4" H x 2" W corrosion hole approximately 5" from the bottom flange behind the guide angle (Photo 3). This girder is located above an expansion bearing. (Refer to sketch for more details). The condition is the same as reported in the last inspection.

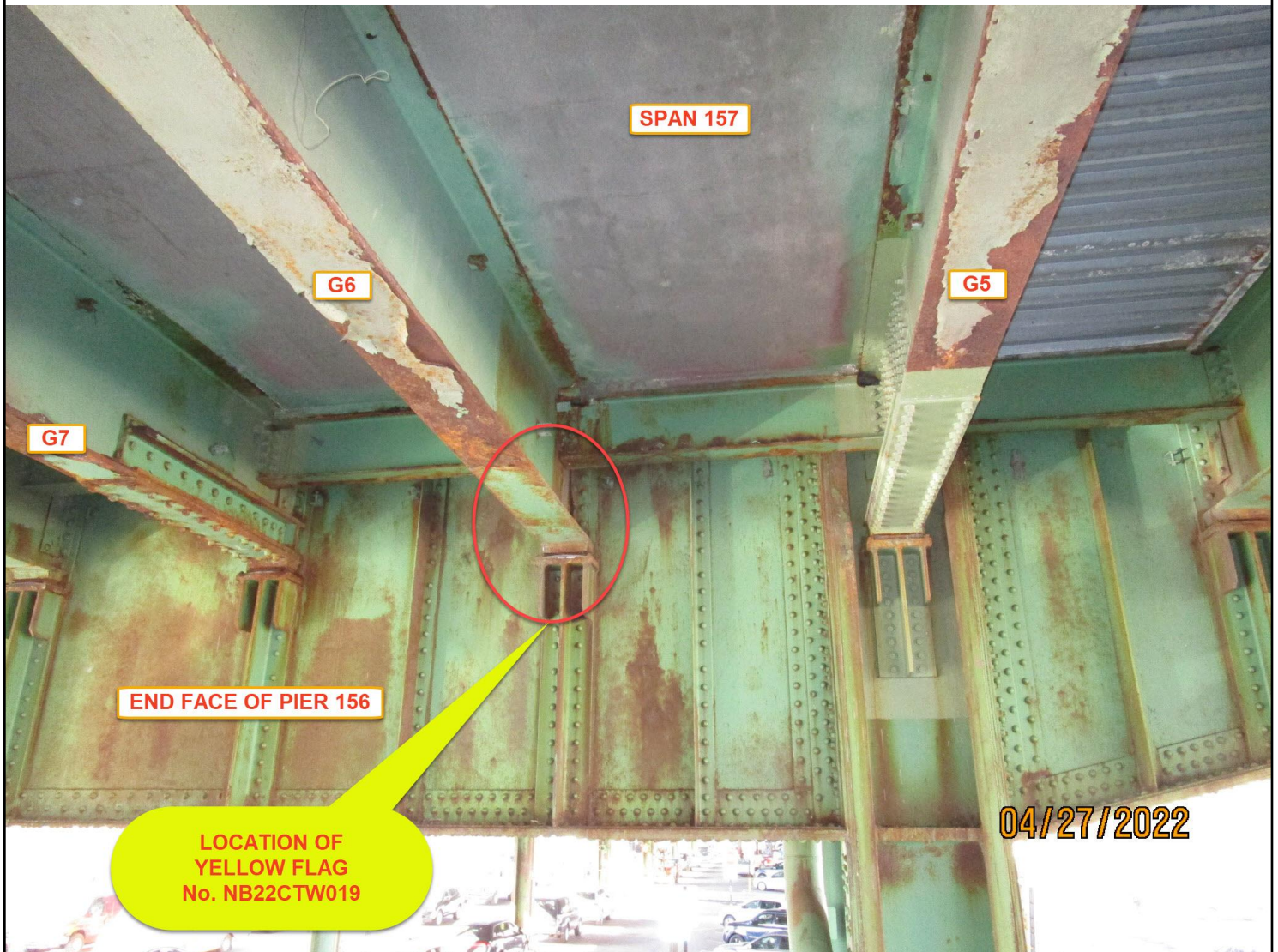
Notes:

- 1.The expansion bearing below Girder G6 exhibits moderate to heavy corrosion at the bearing components and guide plates with up to 30% section loss in the guide plates and 1" pack rust between sliding plate and top of pedestal. The left guide angle exhibits 5"L x 5"W corrosion hole at the bottom of the angle and 3" (previously 2") diameter corrosion hole at the top of the angle. The right guide angle exhibits two corrosion holes at the bottom of the angle for 3"L x 1"W and 2"L x 1"W.
- 2.The adjacent Girder G5 is in good condition with previously installed steel plates and angles at the girder web and bottom flange.
- 3.The adjacent Girder G7 is in fair condition with moderate to heavy corrosion at bearing and pedestal. There are previously installed steel plates and angles at the girder web and bottom flange.
- 4.The flagged condition was accessed using 30ft bucket truck within the parking lot area.

Flag Photographs

Photo Number: 1

Photo Filename: Photo 1-RA 621_0972.jpg



Attachment Description: General view of the flagged location at Girder G6 in Span 157 at Pier 156. Looking Begin.

Photo Number: 2

Photo Filename: Photo 2-RA 621_0992.jpg



Attachment Description: The right face of Girder G6 in Span 157 at Pier 156. The end of the girder exhibits severe section loss in the lower web above the bottom flange and for the full height of the web adjacent to the connection angle. Looking Left.

Photo Number: 3

Photo Filename: Photo 3-RA 621_0980.jpg



Attachment Description: The left face of Girder G6 in Span 157 at Pier 156. The end of the girder exhibits corrosion hole in the web behind the guide angle. Looking Begin and Right.

Photo Number: 4

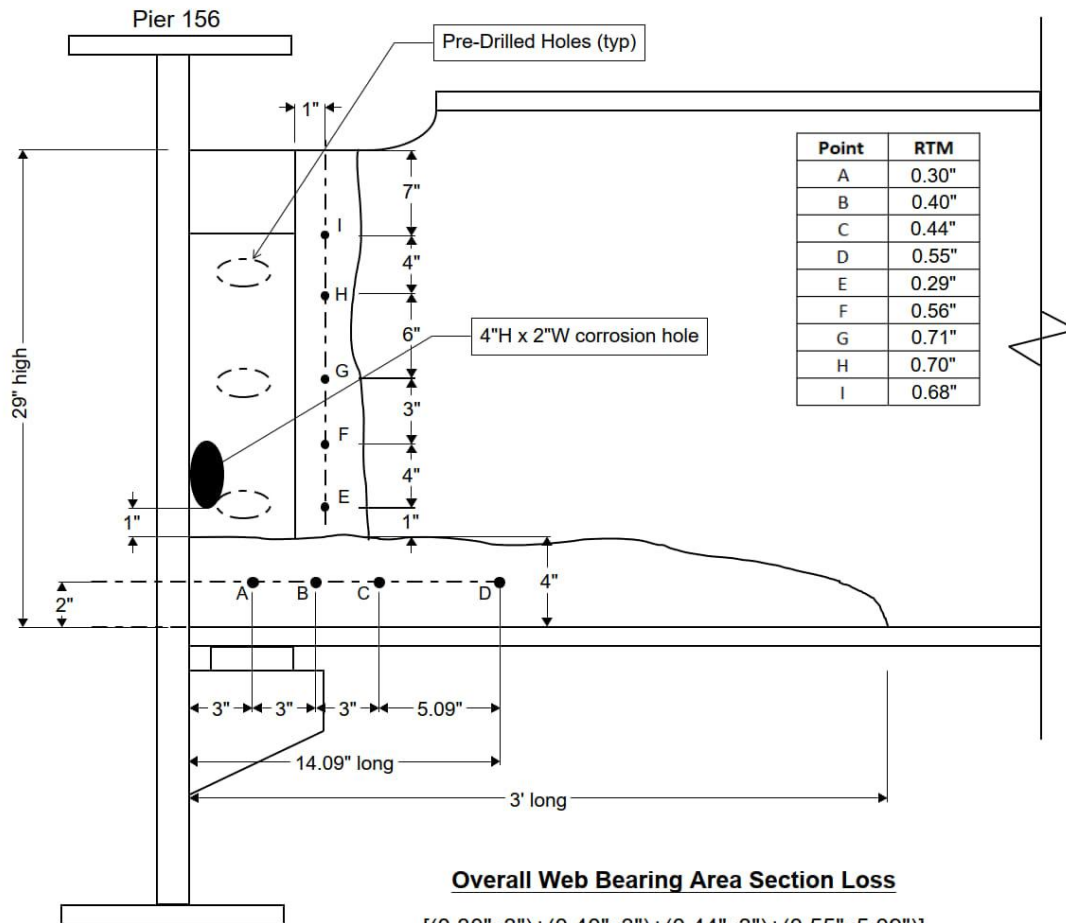
Photo Filename: **Girder Section Loss Sketch.jpg**

Right Face of Girder G6 Sketch in Span 157 at Pier 156

N.T.S.

DATE 04/27/2022

TEAM LEADER Rehan Afridi, P.E. **ASSISTANT TEAM LEADER** Marcos Perez



$$\left[1 - \frac{[(0.30 \times 3'') + (0.40 \times 3'') + (0.44 \times 3'') + (0.55 \times 5.09'')]}{11.03 \text{ in}^2} \right] \times 100 = 44\%$$

Overall Shear Web Area Section Loss

$$\left[1 - \frac{[(0.40" \times 4") + (0.29" \times 1") + (0" \times 4") + (0.71" \times 3") + (0.70" \times 6") + (0.68" \times 11")]}{22.71 \text{ in}^2} \right] \times 100 = 31\%$$

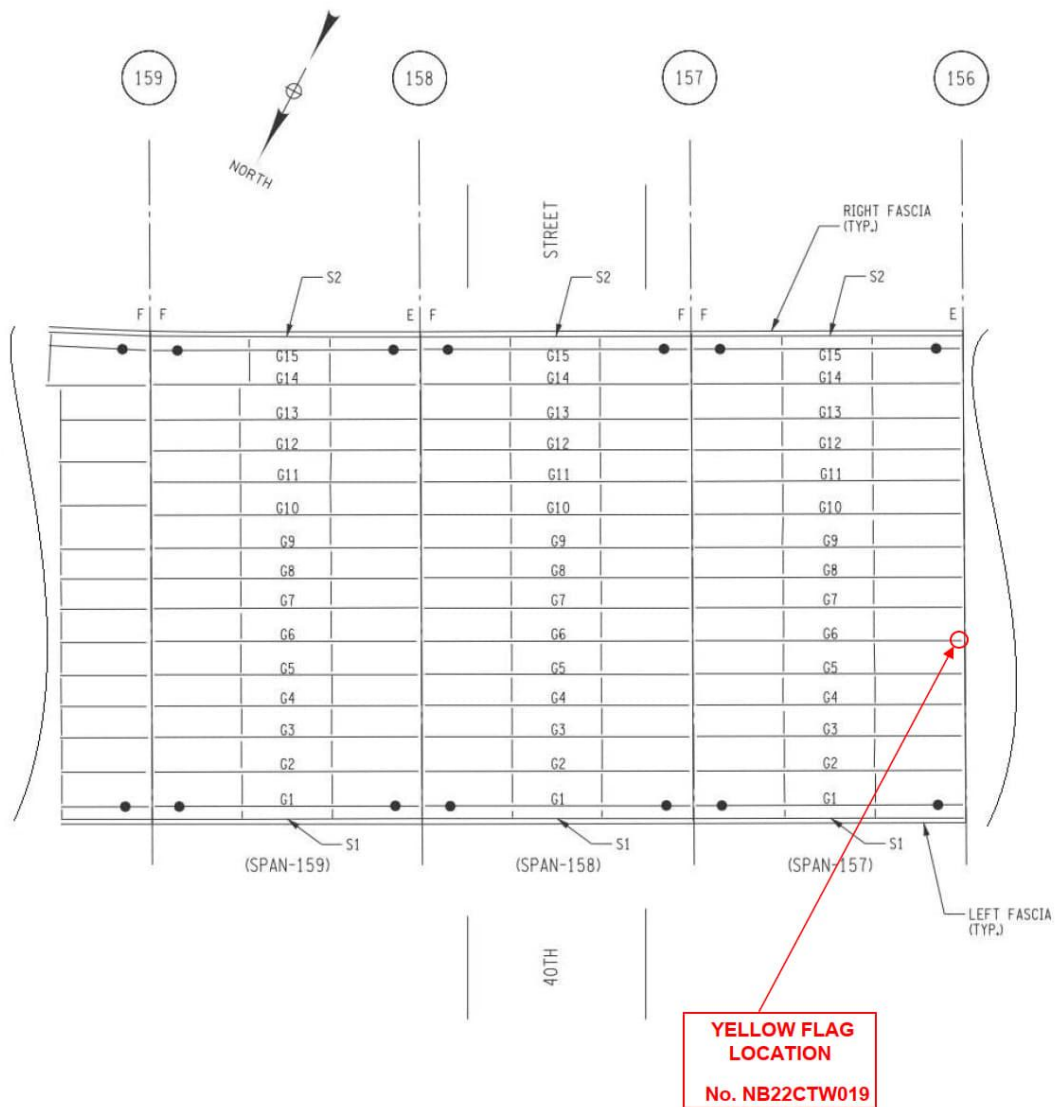
Notes:

- As-built web thickness = 0.783"
- Length of bearing area = $18 \times \text{web thickness} = 18 \times 0.783" = 14.09"$
- Overall bearing area = $14.09" \times 0.783" = 11.03 \text{ in}^2$
- As-built shearing web area = $29" \times 0.783" = 22.71 \text{ in}^2$
- The guide angles at the face of the girder are not shown for clarity
- The remaining area at the lower web beyond 14.09" length exhibits up to 25% section loss

Attachment Description: Girder G6 Sketch in Span 157 at Pier 156

Photo Number: 5

Photo Filename: Framing Plan.jpg



Attachment Description: BIN 1065318, Framing Plan - Spans 157-159